

Detail Design Spec: Piñata Bomb

Piñata Bomb

Description: The Piñata Bomb allows players to subvert and destroy several enemies at once. It acts as a Trojan horse of sorts, attracting enemies towards it (who think that it's full of sweets), and then exploding.

- The Piñata Bomb is a consumable item, meaning that, whenever players use it, the number they have in their inventory is reduced.
- When used, Crash throws the Piñata Bomb in the direction he is facing. It flies in an arc, and when it comes in contact with something that has collision (ground, wall, enemy, etc), it comes to a stop.
 - Crash can throw at his regular item-throwing rate. He throws it ~10m in front of him (TBD).
- When on the ground, the Piñata Bomb extends an invisible spherical radius of ~20m (TBD). Any susceptible enemies within this radius are “attracted” to the bomb.
 - While this is occurring, the Piñata Bomb makes visual and auditory effects, showing how it is attracting enemies.
 - “Attracted” means that the affected enemies are drawn to the centre point of the Piñata Bomb, move into melee attack range, and begin attacking it.
 - The Piñata Bomb does not take damage from enemy attacks (and only explodes after the timer countdown).
- After a set amount of time (~7 sec – TBD), the Piñata Bomb explodes in a large damaging fireball, hitting all enemies within radius.
 - The explosion has a spherical collision volume that is centered on the Piñata Bomb (~5m radius – TBD).
 - The centre of the explosion does Level 6 damage, whereas its shockwave (which is ~2m out of the regular explosion radius) does Level 2 damage.
****NOTE** All damage is TBD based on clarification of the Metagame**
 - If Crash is caught in the explosion, he takes 3 points of damage.
- All enemies within the explosion radius are knocked back ~10m (TBD).
- If players spin and then use the Piñata Bomb, Crash throws the Piñata Bomb ~20m (TBD) in his facing direction.

Components: Light/Scream (Glow Worm) + Explosion (Grenade Seed)

Controls: When equipped, the Crash holds his hand out, and the Piñata Bomb is in it. Players control the direction that the Piñata Bomb is thrown by pointing Crash, as his facing direction determines the throwing angle.

- **Use:** Pressing the Use button allows Crash to throw the Piñata Bomb.

- **Jump:** Crash can throw the Piñata Bomb while jumping to gain a small amount of extra throwing distance.
- **Spin-Use:** Spinning and then pressing Use with the Piñata Bomb equipped causes the bomb to be thrown at double the regular distance (in the direction that Crash is facing). There is an additional animation of Crash making a “heaving” throw.

Upgrades: (Values TBD)

- **Level 1:**
 - Small attraction radius (20m – TBD)
 - Small blast size (5m radius – TBD)
 - Small throw distance (10m – TBD)
- **Level 2:**
 - Additional Functionality: Spin-Use – Increased Throw distance
 - Small Spin-Use Throw Distance (25m – TBD)
 - Medium attraction radius (25m – TBD)
 - Medium blast size (7m radius – TBD)
 - Small throw distance (10m – TBD)
- **Level 3:**
 - Long Spin-Use Throw Distance (30m – TBD)
 - Large attraction radius (30m – TBD)
 - Large blast size (10m radius – TBD)
 - Large throw distance (15m – TBD)

Camera: The camera position when using the Piñata Bomb remains the same as the normal gameplay except during the following situations:

- The camera moves quickly to frame all the enemies a moment before the bomb explodes. Once it blows up, all the enemies are shown blasted into the air.

World Interactions: The Piñata Bomb destroys any props that are affected by Level 6 (TBD) damage or lower. The Piñata Bomb also affects specific prop blockers in the world:

- **Metal Blockers:** There are several blockers in the world that are metallic in nature, and cannot be destroyed by the Boombat. Players must use Piñata Bombs to remove these difficult obstacles.

Enemy Interactions: Note: The following actions are default for the enemy sizes. Some special case enemies have alternate reactions, which are detailed here:

//crash/production/crash4/docs/Design/CrashLanded/CreatureReactions/CreatureReactionTable.xls

Small Enemies:

- Small enemies struck by a Piñata Bomb are knocked back ~10m (TBD), and “obliterated” when they land.

Medium Enemies:

- Medium enemies struck by a Piñata Bomb are knocked back ~10m (TBD), and “obliterated” when they land.

Large Enemies:

- Large enemies struck by a Piñata Bomb are pushed back ~7m (TBD), and take “near death” damage (in the 2 point health system).

Risk/Reward of use: TBD

Challenges/Units of Play: TBD

Detail Design Spec: Light Tool

Light Tool

Description: Using this glowing, torch-style tool, players can light the way in even the darkest locations, allowing Crash to navigate the depths of caves, as well as nighttime on the islands.

- When the Light Tool is equipped, Crash holds it in his hand and it is always present. It casts a sphere of light centred on the tool that illuminates the world at a ~2m radius (TBD).
- Equipping and unequipping the Light Tool does not consume it.
- The Light Tool casts light indefinitely (ie. It doesn't "burn out" or need recharging).
- When used, Crash throws the Light Tool in the direction he is facing. It flies in an arc, and when it comes in contact with something that has collision (ground, wall, enemy, etc), the container breaks. The sphere of light follows the glow worm (thus moving the location of the light off of Crash).
 - The glow worm within remains at the impact point for a short time (~10 sec – TBD). After this time, the glow worm digs into the ground surface and disappears, shutting off the light that was being cast.
 - Upon the disappearance of the thrown glow worm, a new Light Tool appears in Crash's hand.
 - Throwing the Light Tool in this manner consumes a "unit" of the Light Tool.
 - If players press Use while a thrown Light Tool is in the world, the current glow worm instantly plays its "digging away" animation and disappears, and Crash pulls out another Light Tool.
 - This is due to the fact that there can only be one Light Tool in the world at one time. If players choose to "override" their current light tool with another one in their hands, then they should have that option.
 - Crash can throw at his regular item-throwing rate. He throws it ~15m in front of him (TBD).
- If players spin and then use the Light Tool (at Upgrade level 2 or higher), the radius of the Light Tool is expanded greatly for a short time.
 - It expands to ~10m (TBD) for 7 seconds (TBD), then contract back to normal size.

Components: Light/Scream (Glow Worm) + Container (Bottle/Dingodiles)

Controls: When equipped, the Crash holds his hand out, and the Light Tool is in it. Players control the direction that the Light Tool is thrown by pointing Crash, as his facing direction determines the throwing angle.

- **Use:** Pressing the Use button allows Crash to throw the Light Tool. Pressing Use while there is already a Light Tool thrown in the world “cancels” that one and pulls another one into Crash’s hand.
- **Jump:** Crash can throw the Light Tool while jumping to gain a small amount of extra throwing distance.
- **Spin-Use:** Spinning and then pressing Use with the Light Tool in Crash’s hand causes the light’s radius to expand for a short time around Crash. Players can perform this in the air.

Upgrades: (Values TBD)

- **Level 1:**
 - Small light radius (2m – TBD)
 - Short thrown time before disappear (10sec – TBD)
- **Level 2:**
 - Additional Functionality: Spin-Use
 - Small Spin-Use radius (10m – TBD)
 - Medium light radius (4m – TBD)
 - Medium thrown time before disappear (10sec – TBD)
- **Level 3:**
 - Large Spin-Use radius (20m – TBD)
 - Large light radius (6m – TBD)
 - Long thrown time before disappear (10sec – TBD)

Camera: The camera position when using the Light Tool remains the same as the normal gameplay except during the following situations:

- The camera moves upwards and away slightly when using the spin-use in order to view everything within the light radius.

World Interactions: The Light Tool does not interact with any world objects except those specifically designed to work with light.

- **Light Crystals:** Standing beside light crystals with the light tools slowly “charges” them so they produce their own light. Light crystals are lit at 1 “unit” per second (TBD).

Enemy Interactions: Most enemies ignore the light from the Light Tool, performing their regular behavior in the dark or the light. The only creatures that react to the light are the following:

- **Night Creature:** The Night creature is attracted to the light of the Light tool, and sees it from a distance. If players throw the Light Tool away, then the Night Creature is attracted to the thrown light tool, and away from Crash.

Risk/Reward of use: TBD

Challenges/Units of Play: TBD

Detail Design Spec: Jet-Skis

Jet-Skis

Description: Players skim along the seas with these portable jet-skis, which are a pair of skis with rocket propulsion attached to the backs. Players navigate along the waters that are available to them.

- Pressing the Use button toggles the Jet-Skis on and off.
 - When on the ground, toggling the Jet-Skis on results in a humorous animation where Crash cannot move, and looks at the screen unimpressed.
 - When on land, toggling on the Jet-Skis stops player movement and control. Crash plays his humorous reaction animation, and then the Jet-Skis are automatically toggled off again.
 - When in water, toggling on the Jet-Skis automatically cause Crash to jump out of the water, the Jet-Skis appear on his feet, and then he lands atop the water. He is now in “Jet-Ski mode”.
 - Players can toggle on the Jet-Skis in mid-air. The Jet-Skis stay on Crash’s feet until he lands on a surface. Landing on the ground triggers the humorous reaction animation, whereas landing in water causes Crash to be in “Jet-Ski mode”.
- Once in “Jet-Ski mode”, players are free to navigate the waters available to them. There are several areas that players can navigate freely. To limit players from moving too far away from the islands, the following techniques are to be used:
 - **Walled off water:** Several jutting stones stick out of the water, limiting player movement.
 - **Shark Water:** Once players get a far distance out, they’ll notice floating buoys illustrating sharks are in the area. If players continue, and pass a certain area, they are automatically eaten by a large shark that grabs them from under the water.

Components: Tube (Bamboo) + Propulsion (Firefly)

Controls: Players control themselves in “Jet-Ski mode” using vehicular controls. Up accelerates Crash forward. Down slows down Crash’s forward momentum. Left and Right turn Crash left or right, changing movement direction.

- **Use:** Pressing the Use button toggles the Jet-Skis to be equipped or not. This can be successfully performed in the water (transitioning into “Jet-Ski mode”) or in the air. While in “Jet-Ski mode”, if Use is pressed, Crash “puts away” the Jet-Skis, and instantly drops into the water.

- **Jump:** While skimming along the water in “Jet-ski mode”, pressing Jump causes Crash to bounce in the air ~3m (TBD), tucking his feet up. This can be used to clear any water-based obstacles or hazards.
- **Spin:** While in “jet-ski mode”, pressing the Spin button causes Crash to perform a speed boost forward.
- **Spin-Use (aka “Quickstart”):** If players are on land and Spin-Use with the Jet-Skis equipped (similar to triggering the Cluster Bomb for the Boombat), nothing occurs. Doing so in the water causes players to equip the Jet-Skis and immediately move forward with a boost of speed.

Upgrades: (Values TBD)

- **Level 1:**
 - Low turning maneuverability
 - Low speed
 - Lose Jet-Skis at Level 1 Max speed
- **Level 2:**
 - Medium turning maneuverability
 - Medium speed
 - Lose Jet-Skis at Level 2 Max speed
- **Level 3:**
 - High turning maneuverability
 - High speed
 - Lose Jet-Skis at Level 3 Max speed

Camera: The camera position when in “jet-ski mode” is pulled further back (~10m TBD) than normal, with a wider field of view to provide players with a greater sense of speed, as well as a clearer view of the open world.

World Interactions: If players run into solid objects within the world (anything that has collision – walls, props, etc.) while in “jet-ski mode”, and those objects are not considered a “ramp”, players smash into these objects. After collision, Crash’s momentum is lost, and he is bounced back at an angle relative to the angle of collision.

If players are at maximum speed upon collision, and the collision is straight on +/- 15 degrees (TBD), then players lose their Jet-Skis, and must create another set. Otherwise, they do not lose the Jet-Skis, and merely lose momentum.

The following world objects have alternate interactions:

- **Ramps:** Players that run into ramps or ramp-like objects are propelled into the air based on their speed and the angle of the ramp.
- **Damage Hazards:** Objects such as sea urchins that damage players do damage to Crash, but he maintains his speed, and does not lose the Jet-Skis

- **Explosive Hazards:** Explosive hazards, such as floating TNT crates do damage to Crash, and also cause him to lose his Jet-Skis.

Enemy Interactions: Players cannot attack using the Jet-Skis, and there are few enemies that populate the water. If Crash is hit by an enemy and is on Jet-Skis (ex. A Dingodile shoots Crash, or a Firefly follows Crash over the water), he remains on the Jet-Skis. If Crash collides with an enemy while on Jet-Skis (such as a shark), he reacts the same as if he hit an obstacle; he bounces back and loses momentum. Any enemies hit by Crash while on the Jet-Skis perform their hit reaction, and take damage equivalent to being hit by the regular strike of the Boombat (TBD).

Risk/Reward of use: TBD

Challenges/Units of Play: TBD

Detail Design Spec: Jet Pack

Jet Pack

Description: The Jet Pack is the ultimate flying tool, allowing players unprecedented flying accuracy and height as they rocket across the islands.

- When on the ground with the Jet Pack, players navigate the world as normal Crash, but there's a jet pack on his back.
- Pressing and holding Use ignites the jets on the Jet Pack, causing Crash to move upwards.
 - The Jet Pack can be ignited from a jump, or from falling.
- As long as players hold the Use button, the jets apply upwards force. Players can tilt Crash in any direction to allow him to hover in that direction.
- Releasing the Use button causes the upwards force to no longer be applied. Crash will come to a stop and then eventually begin falling normally.
- The Jet Pack has a "thrust gauge", which is illustrated visually on the pack. This illustrates how much constant thrust the pack has. Once this gauge is empty, the Jet Pack stops applying upwards force.
 - The thrust gauge is constantly regenerating, however, and when the Use button is not being held, the thrust returns.
- **Additional Feature:** If players press Spin while in the air using the Jet Pack, they launch a bomb directly below Crash. When this bomb collides with any surface or enemy, it explodes in an attack that does damage equivalent to the Bottle Rocket, but in a larger damage radius (~10m – TBD).
 - This ability can only be performed once every ~4 seconds (TBD).

Components: Dingodile Jetpack Item (???) + Propulsion (Firefly)

Controls: Players control themselves while thrusting upwards. Up, Down, Left and Right all cause Crash to tilt in that direction, and eventually build up speed.

- **Use:** Pressing and holding the Use button initiates thrust on the Jet Pack, launching Crash into the air.
- **Jump:** Jump allows Crash to jump off the ground with the Jet Pack on, but does not have a function while he is in the air.
- **Spin:** This allows Crash to launch a powerful bomb directly below him.

Upgrades: (Values TBD)

- **Level 1:**
 - Low speed (tilting)
 - Low thrust gauge (10 sec burn)
- **Level 2:**
 - **Additional Function:** Jet Bomb – Spin while hovering

- Small Jet Bomb Damage Radius (10m – TBD)
- Medium speed (tilting)
- Medium thrust gauge (15 sec burn)
- **Level 3:**
 - Large Jet Bomb Damage Radius (20m – TBD)
 - High speed (tilting)
 - Large thrust gauge (25 sec burn)

Camera: The camera position while thrusting always keeps Crash in the centre of the camera, and is slightly tilted downwards, allowing players to view what is in front of them easily. While players can change directions quickly, the camera attempts to pull in behind Crash when he is thrusting to one direction for a short period of time (~3 sec – TBD).

- When players press Spin to drop a bomb, there is a short lag, as the camera tilts to almost completely top down in view. Crash is slightly higher onscreen, and his shadow is always viewable. This allows players to properly time the bomb drop.
- If players unequip the jet pack mid-air, the camera pulls in and angles to the “fall camera”.

World Interactions: If players run into solid objects within the world (anything that has collision – walls, props, etc.) while flying, players smash into these objects, but are not hurt. After collision, Crash’s momentum is lost, and he is bounced back at an angle relative to the angle of collision.

Enemy Interactions: Note: The following actions are default for the enemy sizes. Some special case enemies have alternate reactions, which are detailed here:

//crash/production/crash4/docs/Design/CrashLanded/CreatureReactions/CreatureReactionTable.xls

Small Enemies:

- Small enemies struck by a Jet Bomb are knocked back ~10m (TBD), and “obliterated” when they land.

Medium Enemies:

- Medium enemies struck by a Jet Bomb are knocked back ~10m (TBD), and “obliterated” when they land.

Large Enemies:

- Large enemies struck by a Jet Bomb are pushed back ~7m (TBD), and take “near death” damage (in the 2 point health system).

Risk/Reward of use: TBD

Challenges/Units of Play: TBD

	1	1
	Propulsion (Firefly / Fi	Container (Bottle /
1 Propulsion (Firefly / Firefly)	1	X
1 Container (Bottle / Dingodiles)	<i>Rocket?</i>	1
3 Unkownn - BRL (??? / ???)	<i>Bottle Rocket</i>	1
1 Explosion (Grenade Seed)	1	<i>TNT Bottle?</i>
1 Tube (Bamboo / Bamboo Plants)	<i>Jetski</i>	1
1 Pull-In / Bounce (Frog / Frog)	1	Frogzooka
2 Growth (??? / Monkey & Others?)	1	1
4 Unknown - Jetpack (??? / Dingodile #4)	<i>Jetpack</i>	1
1 Skin / Air Resistance (Dingo Pelt / Animals)	1	1
2 Light / Scream (Glow Worm / Glow Worm)	<i>Flashbang</i>	<i>Light Tool</i>

Bounce
Strength
Speed
Armor

Crates
Coconuts
Dingodile Guns?

3	1	1	1
Unkownn - BRL (???) /	Explosion (Grenade Seed	Tube (Bamboo / Ban	Pull-In / Bounce (Fro
X	X	X	X
X	X	X	X
1	X	X	X
1	1	X	X
1	Boombat	1	X
1	1	1	1
Wig of Insanity	<i>Super Explosion?</i>	Fertalizer gun	1
1	1	1	1
1	<i>Parachute Bomb?</i>	<i>Glider</i>	1
1	<i>Pinata Bomb</i>	1	1

2	4	1	2
Growth (??? / Monkey	Unknown - Jetpack (??? / L	Skin / Air Resistance (Dingo	Light / Scream (Glow Worn
X	X	X	X
X	X	X	X
X	X	X	X
X	X	X	X
X	X	X	X
X	X	X	X
1	X	X	X
1	1	X	X
1	1	Parachute?	X
1	1	1	1

1 / Glow Worm)

	Propulsion (Firefly / Firefly)
1 Propulsion (Firefly / Firefly)	1
1 Container (Bottle / Dingodiles)	<i>Rocket?</i>
3 Unknownn - BRL (??? / ???)	<i>Bottle Rocket</i>
1 Explosion (Grenade Seed)	1
1 Tube (Bamboo / Bamboo Plants)	<i>Jetski</i>
1 Pull-In / Bounce (Frog / Frog)	1
2 Growth (??? / Monkey & Others?)	1
4 Unknown - Jetpack (??? / Dingodile #4)	<i>Jetpack</i>
1 Skin / Air Resistance (Dingo Pelt / Animals)	1
2 Light / Scream (Glow Worm / Glow Worm)	<i>Flashbang</i>

1	3	1
Container (Bottle / Dingodiles)	Unkownn - BRL (??? / ???)	Explosion (Grenade Seed)
X	X	X
1	X	X
1	1	X
<i>TNT Bottle?</i>	1	1
1	1	<i>Boombat</i>
Frogzooka	1	1
1	<i>Wig of Insanity</i>	<i>Super Explosion?</i>
1	1	1
1	1	<i>Parachute Bomb?</i>
<i>Light Tool</i>	1	<i>Pinata Bomb</i>

1	1	2
Tube (Bamboo / Bamboo Plants)	Pull-In / Bounce (Frog / Frog)	Growth (??? / Monkey & Others?)
X	X	X
X	X	X
X	X	X
X	X	X
1	X	X
1	1	X
Fertilizer gun	1	1
1	1	1
<i>Glider</i>	1	1
1	1	1

4

1

Unknown - Jetpack (??? / Dingodile #4)	Skin / Air Resistance (Dingo Pelt / Animals)
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
1	X
1	<i>Parachute?</i>
1	1

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Minor loss of fidelity

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9

Detail Design Spec: Glider

Glider

Description: Players take to the skies with this portable hang glider, which allows them to travel through the air, but only on a decent.

- When on the ground with the glider, players navigate the world as normal Crash, but there's a large glider on his back.
- Pressing Jump or Spin with the Glider equipped launches Crash to go into "glide mode", where the navigation and controls are different than regular Crash.
 - Jump causes Crash to jump 2x his regular jump height (TBD), and then transition to "glide mode" from that point.
 - Spin launches Crash much higher in a sort of vertical barrel roll, getting triple spin jump height (TBD). Once at this height, Crash levels himself and transitions to "glide mode".
- While in "glide mode" Crash is always moving forward and at a set speed, and is also always slowly descending at a set speed. Players can control Crash using "flight" controls and navigate through the environment.
- Because the glider is always descending, this tool is difficult to navigate large expanses of territory without high cliffs to jump off of. To allow players a way to ascend, there are visible air currents (shown as vertical tunnels of wind) placed throughout the environment that push the glider up quickly, granting players more flight time. These air currents are strategically placed so as to not allow players to sequence break the game flow.

Components: Tube (Bamboo) + Skin/Air Resistance (Dingo Pelts)

Controls: Players control themselves in "glide mode" using traditional flight controls. Up pushes the nose downward, causing the glider to descend faster. Down angles the nose up, which minimizes the downwards movement (it does not eliminate the descent, however). Left and Right roll the glider left or right, changing movement direction.

- **Use:** Pressing the Use button toggles the glider to be equipped or not. This can be performed on the ground (while walking as Crash) or in "glide mode" (which causes Crash to instantly drop to the ground).
- **Jump:** While on the ground, jumping puts Crash into "glide mode" close to the ground. While in the air, pressing Jump does not perform an action.
- **Spin:** While on the ground, spinning causes Crash to be launched vertically into the air, and then even out in "glide mode". While in "glide mode", pressing the Spin button causes Crash to perform a speed boost forward (with a horizontal barrel roll animation attached to the boost).

Upgrades: (Values TBD)

- **Level 1:**
 - Low maneuverability (pitch/roll)
 - High rate of descent
- **Level 2:**
 - Medium maneuverability (pitch/roll)
 - Medium rate of descent
- **Level 3:**
 - High maneuverability (pitch/roll)
 - Low rate of descent

Camera: The camera position when in “glide mode” of the glider is pulled further back (~10m TBD) than normal, with a wider field of view to provide players with a greater sense of speed, as well as a clearer view of the open world.

- When players fly into an updraft, the camera pulls back further and ascends with players.
- If players unequip the glider mid-air, the camera pulls in and angles to the “fall camera”.

World Interactions: If players run into solid objects within the world (anything that has collision – walls, props, etc.) while in “glide mode”, they lose their glider (removing one “use” of it from their inventories). The glider is “broken” (and must be created again), and Crash falls at the point of impact. The following objects within the world do not cause Crash to lose the glider:

- **Updraft Windtunnels:** Players ascend vertically when they collide with these objects.
- **Invisible objects (seen by the “Wig of Insanity”:** Because any objects viewable by the Wig of Insanity are incorporeal, they do not affect players on the glider.

Enemy Interactions: Players cannot attack using the glider, but they can, however, run into enemies while on the glider. Doing so results in the same reaction as colliding with world objects, which is breaking the glider, losing it, and Crash falling.

Risk/Reward of use: TBD

Challenges/Units of Play: TBD

Detail Design Spec: Frogzooka

Overview

The following document details the edge cases of how the Frogzooka is to be used in game.

Tongue Length

The range of the Frogzooka's tongue changes based on the type of target that players have in their view.

- **Enemies/Items:** The Frogzooka has a range of 40 – 20 m (TBD) where the “out of range” reticle appears, whereas the actual shot length is 20m
- **Navigational Objects:** When players try to target objects for platforming challenges, the Frogzooka has a range of 45 – 30m (TBD) where the “out of range” reticle appears, where the actual shot length is 30m

NOTE: If this difference is found to be frustrating for players (“why can’t I target this enemy when I can target that anchor point?”), then the lengths may need to be the same, or very similar.

Enemy Interactions

Small Enemies:

- **Regular Frogzooka Use:** Small enemies are pulled towards Crash and deposited in front of him. They are not damaged, but remain stationary for 1 second (giving players time to spin attack them).
- **Spin Attack during Frogzooka Use:** As small enemies are being pulled towards Crash, players can press spin. This attacks enemies the moment they enter the damage area, knocking them back (and not giving them time to be deposited in front of Crash).
- **Frogzooka Spin-Use:** Small enemies (as well as any items) are pulled towards Crash, similar to the regular Frogzooka use. All small enemies caught in the radius are deposited within short range around Crash.
 - Small enemies are pulled in a straight line to a small radius around Crash.

Medium Enemies:

- **Regular Frogzooka Use:** Crash is pulled to close range of the enemy, and is deposited there.
- **Spin Attack during Frogzooka Use (Torpedo Attack):** Crash performs a special spin animation (spinning feet forward like a bullet at his enemy). Upon collision with the enemy, Crash kicks the enemy, and lands, while the enemy slides backwards for a short distance (~7m). The enemy is not damaged, but remains

stationary after the push for 1 second) giving players time to prepare their offensive attacking weapon.

- This attack allows players to close the distance with medium range enemies.
- If an enemy is near a ledge, the enemy is pushed off that ledge unless otherwise stated. (TBD)
- If an enemy is pushed into a wall, then Crash bounces back so that there is at least ~7m (TBD) distance between Crash and the enemy.
- **Frogzooka Spin-Use:** Medium sized enemies ignore the Frogzooka spin-use.

Large Enemies:

- **Regular Frogzooka Use:** Crash is pulled to close range of the enemy, and is deposited there.
- **Spin Attack during Frogzooka Use (Torpedo Attack):** Crash performs a special spin animation (spinning feet forward like a bullet at his enemy). Upon collision with the enemy, Crash kicks the enemy, and lands, but the enemy does not slide. The enemy is not damaged, and is instantly ready to attack Crash.
- **Frogzooka Spin-Use:** Large enemies ignore the Frogzooka spin-use.

Prop Interactions

Navigation Props: These props are scattered through the world and are anchors for the Frogzooka, allowing players to travel to areas they normally would not be able to reach. These props always have a symbol/visual element that allows players to easily understand where these anchor props are. There are 3 navigation props:

- **Ground Anchors:** These are objects that are placed on the lips of ledges throughout the world. Once players use the Frogzooka pull themselves to these anchors, Crash automatically vaults over them to the other side.
- **Wall Anchors:** These are “sticky walls” that are places around the environment. Crash does not pull himself over these, but instead directly into them. After being pulled to the wall, Crash falls down in front of them (instead of vaulting over the anchor).
- **Destructible Anchors:** These are objects such as walls or obstacles that players must pull themselves to and spin attack. Doing this destroys the anchors, and opens a path for players to continue. If players do not attack the object in time, then Crash “splats” against the obstacle, and falls back down.

Tug ‘O War Props: These objects are large heavy world objects (or enemies) that players need to complete a tug ‘o war minigame to pull down/off. Upon using the Frogzooka on the prop, Crash digs in his heels, and begins pulling back on the Frogzooka. Players are presented with a HUD element showing a button that they must press quickly. They have a limited time to press the button a number of times, or they fail the minigame.

- **Success:** The object is pulled down/back, and provides a positive outcome for the players
- **Failure:** Crash is pulled towards the desired object, and “splats” into it, taking a small amount of damage.

Item Interaction List

- **Fireflies:** Upon using the Frogzooka on fireflies, they are collected and placed in the players’ inventories.
- **Grenades:** Upon using the Frogzooka on a grenade, it is pulled towards Crash, and is automatically placed in his hand, ready to throw.
- **Crates:** If players use the Frogzooka on a crate, the crate is pulled towards Crash, and lands undamaged at his feet.
- **Wumpa Fruit:** Wumpa fruit is automatically collected and its benefits applied to Crash upon collecting it with the Frogzooka.
- **Sea Urchins:** Sea urchins grabbed by the Frogzooka are pulled to the Crash’s feet. However, they delay their attack for 1 second (TBD), giving players enough time to run out of range of their attack.
- **Resources:** Resources are automatically collected upon collecting them with the Frogzooka. For resources that can only be carried and not collected into an inventory, the resource is pulled to Crash and automatically placed in his hands.

Camera

The camera position when using the Frogzooka remains the same as the normal gameplay except during the following situations:

- Once collided with a target that is to be pulled towards players, the camera shifts to one side so both Crash and the object are in view.
- While targets are being pulled to Crash, both Crash and the target stay framed in view
- While Crash is being pulled to a target, the camera raises up and tilts down, giving players a better view of when Crash will impact with the target (and how long they have to torpedo attack).
- When a Tug ‘O War is initiated, the game shifts to a dynamic camera angle that illustrates how well players are doing in the minigame.

Presentation Elements

Frogzooka Pacing: The usage of the Frogzooka needs several steps implemented in the presentation to create a more impactful experience.

- Initial Squeeze
- Tongue flies out
- Tongue sticks on a target (incl. a “stick on” effect, and an animation pause)

- Crash pulls back, tongue goes taut
- A – The objects is quickly pulled towards crash
- B – Crash is strongly pulled off his feet to his target

Note that, while in the air, this pacing increases in speed to allow players to use the Frogzooka in the air. However, if the target requires the Tug 'O War, the Tug 'O War minigame does not initiate until Crash lands on the ground.

Turning while shooting the Frogzooka: If players rotate Crash while the Frogzooka tongue has been launched out, (thus having the tongue shot one direction, but the frog's face in another), the tongue should wrap around the side of the mouth, and not clip through the head of the Frogzooka.

The alternate solution is that when the Frogzooka has been launched, Crash's torso (or the hand that is holding the Frogzooka) stays at the angle that the tongue has been shot at until the tongue returns into the frog's mouth.

Detail Design Spec: Flash Bang

Flash Bang

Description: Players can get Crash out of a jam with this defensive tool that allows them to stun enemies for a short time.

- The Flash Bang is a consumable item, meaning that, whenever players use it, the number they have in their inventory is reduced.
- When used, Crash throws the item in the direction he is facing. It flies in an arc, and when it comes in contact with something that has collision (ground, wall, enemy, etc), it explodes.
 - Crash can throw at his regular item-throwing rate. He throws it ~15m in front of him (TBD).
 - The explosion has a spherical collision volume that is centered on the point of contact (~3m radius – TBD).
 - The explosion has a visual flash effect, and causes a loud noise.
- All enemies within the explosion radius are knocked back slightly (~2m) and “dazed” (meaning that their combat AI is frozen, and they play a looping “dazed” animation until the daze effect ends).
 - Crash is not dazed by this effect (though he does play a humorous animation when in the Flash Bang explosion collision volume).
- While in the “dazed” state, players can use another Flash Bang to stun the enemies again.
- If players spin and then use the Flash Bang, Crash creates a large flash explosion (Flash Blast) centered around himself that dazes any enemies within a ~10m (TBD) radius.
 - This ability, however, uses 5 Flash Bangs instead of just one.
 - If players only have 4 Flash Bangs in their inventory, then they cannot perform this ability.

Components: Light/Scream (Glow Worm) + Propulsion (Firefly)

Controls: When equipped, the Crash holds his hand out, and the Flash Bang is in it. Players control the direction that the Flash Bang is thrown by pointing Crash, as his facing direction determines the throwing angle.

- **Use:** Pressing the Use button allows Crash to throw the Flash Bang.
- **Jump:** Crash can throw the Flash Bang while jumping to gain a small amount of extra throwing distance.
- **Spin-Use:** Spinning and then pressing Use with the Flash Bang equipped causes a large Flash Blast around Crash. Players can perform this in the air.

Upgrades: (Values TBD)

- **Level 1:**

- Low enemy daze time (7 sec – TBD)
- Small flash size – Thrown (3m – TBD)
- Small flash size – Flash Blast (5m radius – TBD)
- **Level 2:**
 - Medium enemy daze time (12 sec – TBD)
 - Medium flash size – Thrown (5m – TBD)
 - Medium flash size – Flash Blast (7m radius – TBD)
- **Level 3:**
 - Long enemy daze time (15 sec – TBD)
 - Large flash size – Thrown (7m – TBD)
 - Large flash size – Flash Blast (10m radius – TBD)

Camera: The camera position when using the Flash Bang remains the same as the normal gameplay except during the following situations:

- The camera moves upwards and away slightly when using the Flash Blast in order to view all the enemies within the blast.

World Interactions: The Flash Bang does not interact with any world objects except those specifically designed to work with light (ie. Light Tool).

- **Light Crystals:** Instead of standing beside crystals to make the light tools slowly light up the crystals, players can use a Flash Bang to instantly light the crystal. However, this does consume one of their items, thus the trade off (speed vs. usage).

Enemy Interactions: Almost all enemies behave the same way with the Flash Bang, as they become dazed for a short period of time. However, there are a few enemies that behave differently to the Flash Bang:

- **Do Not Disturb Creature:** The DND creature is immune to the dazing power of the Flash Bang, and is, in fact, attracted to the sound that the Flash Bang creates.
- **Night Creature:** The Night creature is actually damaged by Flash Bangs, and takes “near death” damage (in the 2 point health system).

Risk/Reward of use: TBD

Challenges/Units of Play: TBD

Detail Design Spec: Fertilizer Gun

Overview

The following document details the edge cases of how the Fertilizer Gun is to be used in game.

Description

The Fertilizer Gun is a useful projectile weapon that allows players to quickly deal damage to enemies while still keeping Crash out of melee range. Unlike traditional guns, where the projectiles do the damage, the Fertilizer Gun focuses on firing seeds that, once in contact with the ground, cause a damaging plant to speedily grow underneath the enemy, striking it from below.

- Crash holds the Fertilizer Gun in his hands, and normally has it aimed in the direction he is facing. Firing the Fertilizer Gun with no enemies or potential targets onscreen causes Crash to fire a shot directly straight ahead in the direction he is facing.
 - The Fertilizer Gun fires “seed pellets”.
 - The shot’s maximum range is ~25m (TBD)
 - Crash’s rate of fire is 1 shot every 0.5 seconds (TBD)
 - The shot fires in a slight arc, staying basically level until the last ~5m of its trajectory (TBD)
- A seed pellet is activated if it collides with the following:
 - **Navigable Terrain:** This means that if it collides with any ground surface that Crash and enemies can walk on (any terrain angle less than 45 degrees – TBD). This includes water, swamp water, sand, grassland, etc.
 - If a seed pellet collides with a surface that is not valid (un-navigable ground terrain or props), it bounces off the surface until. If it bounces 3 times and does not collide with a valid surface, the seed pellet disappears.
 - **A valid target:** This includes non-flying enemies, interactive world items, and specific Fertilizer Gun tailored props.
- Once the seed pellet is activated, an “attack plant” is spawned from the ground at the collision coordinates. A large, plant-like growth shoots out of the ground, spawning a damage collision volume around it (~1m radius). The following actions occur upon collision, based on what is being hit:
 - **Navigable Terrain:** A corresponding attack plant appears.
 - **An Enemy:** The seed pellet intersects with the enemy, disappearing and leaving a green liquid particle effect. After this moment of impact, the corresponding attack plant is spawned directly below the centre point of the enemy that has been struck.

- The damage volume that is generated interacts with the enemy, usually launching the enemy into the air (see “Enemy Interactions” section below).
- **An interactive world item:** These items include stones and other objects Crash can pick up. In the case that these objects are hit by the attack plant, they are launched into the air with the same parameters as enemies of equivalent “weight” (ex. Small rock = crab, large boulder = Shark)
- **Fertilizer Gun Specific Props:** These are props that have specific interactions with the Fertilizer Gun. They can include mounds of dirt that grow platform-able trees, or regrowing destroyed trees.
- Once an attack plant has grown to its full size, and has completed its growing animation, its damage collision is shut off. Instead, as the plant remains, it instead has a normal physical collision volume that can be jumped on by Crash, and blocks entities from travelling through it.
- The attack plant remains for a set time (~5 sec – TBD), after which it plays a disintegration animation, and disappears.
- If players spin, and then press Use (while having the Fertilizer Gun equipped), they launch a wall of several attack plants in a semi-circular pattern in front of Crash. This damages any enemies within range, and also creates a defensive wall to protect Crash.

Surface Based Attack Plants

- The Fertilizer Gun’s attack plants change based on the surface that they are spawned. The following is a list of the plants that spawn on each surface (**NOTE:** The following list is TBD)
 - Beach Sand = Palm tree
 - Grove = Giant fist tree
 - Grassland = Bouncy bush
 - Ocean water = coral
 - Swamp = Lily pads
 - Desert = Cactus
 - Wetland = TBA
 - Dry grass = TBA
 - Jungle = Ambush plant; poison ivy
 - Caves = Blocking roots
 - Lava = Temp burnt platform; burning bush; T2 fist; petrified wood; crystal tree platform
 - Gravel / rocky path = TBA
- Due to technical limitations, only a set number of attack plants (~20 – TBD) can be spawned in the game world at one time. Once there is more than this number in the world, the earliest attack plants still in the world disappear immediately.

Fertilizer Gun Auto-Targeting

- The Fertilizer Gun has an auto-targeting system that does not require precision aiming on the players' part.
- As long as the Fertilizer Gun is equipped, an invisible cone of detection is cast before Crash. The closest valid enemy to the centre point of that cone is selected as the target, and is highlighted.
 - If that enemy is within striking range of a shot, then it is highlighted red. Otherwise, the target is highlighted white to illustrate that players won't be able to hit it at the current range.
 - The cone of detection has a maximum range where it stops detecting targets (~50m – TBD)
- When an enemy is targeted, and players press the Use button, a shot is fired to that enemy.
 - If the enemy is within range, the shot automatically targets the range, and hits the enemy.
 - If the enemy is not in range, then the shot still fires in that direction, but the shot only goes as far as its distance limit.
- If there are no enemies within the cone of detection, then any valid world items or Fertilizer Gun specific props are highlighted.

Components

Tube (Bamboo) + Growth (Monkey/???)

Enemy Interactions

Note: The following actions are default for the enemy sizes. Some special case enemies have alternate reactions, which are detailed here:

//crash/production/crash4/docs/Design/CrashLanded/CreatureReactions/CreatureReactionTable.xls

Small Enemies:

- **Hit by an Attack Plant:** Small enemies are "launched" vertically into the air a far distance 25m (TBD), and take killing damage.
- **Collision with Attack Plant (post "Vertical Strike"):** Small enemies cannot move through an attack plant.

Medium Enemies:

- **Hit by an Attack Plant:** Medium-sized enemies are “launched” vertically into the air a medium distance 10m (TBD), and take “near death” damage (in the 2 point health system).
- **Collision with Attack Plant (post “Vertical Strike”):** Medium enemies cannot move through an attack plant.

Large Enemies:

- **Hit by an Attack Plant:** Large enemies are “launched” vertically into the air a Small distance 3m (TBD), but do not take any damage.
- **Collision with Attack Plant (post “Vertical Strike”):** Large enemies can move through an attack plant (doing so destroys the plant before it “disintegrates”).

Prop Interactions

Grow Dirt: There are several spots where a fertile mound of dirt is present. Players must shoot this mound with the Fertilizer Gun to grow a prop. This prop can include a climbable tree, or a bouncy bush (to jump high heights). Once this prop is grown, players are free to use it to navigate the world. It only disappears once players re-load the game, or leave the island.

Regrow Trees: Players can destroy several trees and bushes using weapons such as the Boombat or Bottle Rocket. If players wish these trees to be whole once more, they can fire the Fertilizer Gun at the leftover stump. Doing so “regrows” the prop, resetting it to its original state.

Item Interaction List

- **Grenades:** Upon hitting a grenade with the Fertilizer Gun, the grenade explodes, damaging all entities within the explosion range, including Crash.
- **Crates:** If players use the Fertilizer Gun on a crate, the crate is destroyed, and all its contents hit the ground. The contents should never be hit by the same Fertilizer Gun shot that destroys the crate.
- **Wumpa Fruit:** Wumpa fruit hit by a Fertilizer Gun shot is launched into the air similar to other items.
- **Sea Urchins:** Sea urchins that are hit by the Fertilizer Gun are launched vertically (similar to a “small enemy”).
- **Resources:** Resources hit by a Fertilizer Gun shot is launched into the air similar to other items.

Upgrades (Values TBD)

- **Level 1:**
 - Short Plant Remain Time (5 sec – TBD)
 - Short Shot Range (25m – TBD)

- **Level 2:**
 - Additional Functionality: Spin Use – Plant Wall
 - Small Plant number in Plant Wall attack (5 – TBD)
 - Medium Plant Remain Time (7 sec – TBD)
 - Medium Shot Range (30m – TBD)
- **Level 3:**
 - Large Plant number in Plant Wall attack (8 – TBD)
 - Long Plant Remain Time (15 sec – TBD)
 - Long Shot Range (40m – TBD)

Camera

The camera position when using the Fertilizer Gun pulls back slightly to view a further distance of enemies (to the sides of the screen).

Presentation Elements

Attack Plant Pacing: The usage of the Fertilizer Gun needs several steps implemented in the presentation to create a more impactful experience.

- Slight frame freeze upon hitting with an attack plant strike (~2 frames)

		Small	Small	Small
Dmg Lvl	Attack	Starfish	Bandicoot	Turtle
1	Player Touch (Lateral)	LightHit	LightHit	LightHit
2	Player Lands On Me (Top)	Flatten b	Flatten b	K b , R b
2	Spin Attack (Lateral)	HardHit L	HardHit L	K L , R L
N/A	Frogzooka (not upgraded)	LightHit	LightHit	LightHit
N/A	> Spin Use	LightHit	LightHit	LightHit
3	Boombat (Lateral)	HardHit L	HardHit L	K L , R L
5	> Charge Use (Lateral)	Obliterate	HardHit L	Obliterate
3	> Spin Use (Explosion)	HardHit L	HardHit L	K L , R L
4	Fertilizer Gun	HardHit L	HardHit L	K L , R L
4	> Spin Use	HardHit L	HardHit L	K L , R L
DAZE	Glow Tool	HardHit	HardHit	HardHit
DAZE	> Spin Use	HardHit	HardHit	HardHit
6	Rocket Launcher	Obliterate	HardHit L	Obliterate
6	> Spin Use	Obliterate	HardHit L	Obliterate
6	TNT Core (Explosion)	Obliterate	HardHit L	Obliterate
3	TNT Shockwave (Explosion)	HardHit L	HardHit L	K L , R L
2	Thrown Object Light	HardHit	HardHit L	K L , R L
5	Thrown Object Heavy	Obliterate	HardHit L	Obliterate
1	Generic Hit/Impact L1	LightHit	LightHit	LightHit
2	Generic Hit/Impact L2	HardHit	HardHit	K, R
3	Generic Hit/Impact L3	HardHit	HardHit	K, R
4	Generic Hit/Impact L4	HardHit	HardHit	K, R
5+	Generic Hit/Impact L5+	Obliterate	HardHit	
Special Notes:			Mission objectives; not killable	When turtle is hiding in its shell it is unaffected by certain attacks

NOTE Text = describes the reaction that will occur; Color = state transition that happens after that reaction

UNAFFECTED	Unaffected	Unaffected: Creature does not react or transit to different state
RECOVER	LightHit	Recover Reactions: Creature does reaction described by the text p
	HardHit	
	Flatten	
NEARDEAD	HardHit	NearDead Reaction: Creature has a 2-health-point system. First it
DAZED	HardHit	Dazed Reaction: If not already NearDead, creature does reaction c
KILLED	HardHit	Killed Reactions: Creature does impact reaction (described by the
	Obliterate	
	Flatten	
	Collected	

DEPENDS	N / K	The "/" indicates NearDead/Kill Reaction: Creature has a 2-health-
	U, R, N, K, ...	The "," indicates a different state transition depending on current ci
SPECIAL	<Special Reaction>	Special Reaction: Creature is affected by this attack in a way that tl
	+	Something happens in addition to the reaction. E.g. "HardHit + Dis:
	x	Attacker is harmed
	b	Attacker is bounced
	p	Attacker is pushed away
	L	Creature is launched

Small Turtle - Spiky	Small Crab	Small Spiky Crab	Small Kamikaze Crab	Small Ninja Crab
Unaffected x	LightHit	Unaffected x	U x, R	LightHit
LightHit xb	N b / K b	N b / K b	N b / K b	N b / K b
LightHit x	N L / K L	LightHit x	U x, N L / K L	N L / K L
LightHit x	HardHit	HardHit x	HardHit	HardHit
LightHit x	HardHit	HardHit x	HardHit	HardHit
HardHit L	HardHit L	HardHit L	HardHit L	HardHit L
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
HardHit L	HardHit L	HardHit L	HardHit L	HardHit L
HardHit L	HardHit L	HardHit L	HardHit L	HardHit L
HardHit L	HardHit L	HardHit L	HardHit L	HardHit L
HardHit	HardHit	HardHit	HardHit	HardHit
HardHit	HardHit	HardHit	HardHit	HardHit
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
HardHit L	HardHit L	HardHit L	HardHit L	HardHit L
N / K	N / K	N / K	N / K	N / K
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
Unaffected x	LightHit	Unaffected x	U x, R	LightHit
LightHit x	N / K	LightHit x	U x, N / K	N / K
HardHit x	HardHit	HardHit x	HardHit	HardHit
HardHit x	HardHit	HardHit x	HardHit	HardHit

Doesn't hide in shell. Just pure & simple walking hazard.	All 4 crabs have 2 health points: flipped, then die	Undamaged by certain lateral attacks due to spikes	When charging, immune to frontal attacks and instead deals damage on frontal contacts
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part, but recovers after that and doesn't transit to a different dazed/neardead/killed state

does reaction described by the text part, then goes to a new state. If hit again by this attack, retrigger this state.
described by the text part, then becomes dazed (Light Tool specific)
text part) and ceases to exist

Small	Small	Small	Small	Small
Firefly	Firefly - Projectile	Frog	Grenade Plant	Monkey
Obliterate x	Obliterate x	LightHit	LightHit	LightHit
Obliterate x	Obliterate x	Flatten b	LightHit b	N b / K b
Obliterate x	Obliterate x	HardHit L	N p / K L	N / K L
Collected	Collected	LightHit	LightHit	LightHit
Collected	Collected	LightHit	LightHit	LightHit
Obliterate x	Obliterate x	HardHit L	HardHit L	HardHit L
Obliterate x	Obliterate x	Obliterate	Obliterate	Obliterate
Obliterate x	Obliterate x	HardHit L	HardHit L	HardHit L
Obliterate	Obliterate	HardHit L	Become Hydra	HardHit L
Obliterate	Obliterate	HardHit L	Become Hydra	HardHit L
HardHit	HardHit	HardHit	HardHit	HardHit
HardHit	HardHit	HardHit	HardHit	HardHit
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
Obliterate	Obliterate	HardHit L	HardHit L	HardHit L
Obliterate	Obliterate	HardHit L	N / K	N / K
Obliterate	Obliterate	Obliterate	Obliterate	Obliterate
Obliterate x	Obliterate x	LightHit	LightHit	LightHit
Obliterate x	Obliterate x	HardHit	N / K	N / K
Obliterate x	Obliterate x	HardHit	HardHit	HardHit
Obliterate x	Obliterate x	HardHit	HardHit	HardHit

Want life to be as brief as possible (cuz hover above ground)	Want life to be as brief as possible (cuz hover above ground)	Becomes collectable during NearDead state. Never actually dies unless obliterated.	Rooted in one place, so not uprooted until killed.	Not uprooted until killed. Dodges all attacks except for ammo counter by boombat
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State can be "Stunned", "Berserk"... whatever indicates it's one hit away from being killed

Medium	Medium	Medium	Medium	Medium
Dingo	Miniroller	Wild Pig	Dingodile	Crocodile
LightHit	LightHit L	LightHit	LightHit	LightHit
LightHit b	LightHit L b	LightHit b	N+Disarm b	LightHit b
LightHit	LightHit L	LightHit	N+Disarm	LightHit
LightHit	LightHit L	LightHit	N+Disarm	LightHit
LightHit	LightHit L	LightHit	N+Disarm	LightHit
N L / K L	N L / K L	HardHit L	N+Disarm L / K L	HardHit L
HardHit L	HardHit L	HardHit L	HardHit L	N L / K L
N L / K L	N L / K L	HardHit L	N+Disarm L / K L	HardHit L
N L / K L	N L / K L	HardHit L	N+Disarm L / K L	N L / K L
N L / K L	N L / K L	HardHit L	N+Disarm L / K L	N L / K L
HardHit	HardHit	HardHit	HardHit + Disarm	HardHit
HardHit	HardHit	HardHit	HardHit + Disarm	HardHit
Obliterate	Obliterate	HardHit L	Obliterate	HardHit L
Obliterate	Obliterate	HardHit L	Obliterate	HardHit L
Obliterate	Obliterate	HardHit L	Obliterate	HardHit L
N L / K L	N L / K L	HardHit L	N+Disarm L / K L	HardHit L
LightHit	LightHit	LightHit	N+Disarm	LightHit
HardHit L	HardHit L	HardHit L	HardHit L	N L / K L
LightHit	LightHit	LightHit	LightHit	LightHit
LightHit	LightHit	LightHit	N+Disarm	LightHit
N / K	N / K	HardHit	N+Disarm / K	HardHit
N / K	N / K	HardHit	N+Disarm / K	N / K

Locomotive tool; not killable.

Disarmed/melee state = first point of health, after that possible to die from hard enough hit

A bit tougher than other Medium Creatures but less tough than Large Creatures.

Medium	Medium	Medium	Medium	Large
Ambush Plant	Ground Spike	Vulture	JetSki Creature	Shark
LightHit	Unaffected x	LightHit	LightHit	Unaffected xp
LightHit b	Unaffected xb	LightHit b	LightHit b	Unaffected xb
HardHit	Unaffected x	LightHit	LightHit	Unaffected xp
LightHit	Unaffected x	LightHit	LightHit	Unaffected xp
LightHit	Unaffected x	LightHit	LightHit	Unaffected xp
HardHit	Obliterate	HardHit L	HardHit L	LightHit
HardHit	Obliterate	HardHit L	HardHit L	HardHit L
HardHit	Obliterate	HardHit L	HardHit L	LightHit
HardHit	Obliterate	HardHit L	HardHit L	R L , (5x)Feed Oblit
HardHit	Obliterate	HardHit L	HardHit L	HardHit L
HardHit	Unaffected	HardHit	HardHit	HardHit
HardHit	Unaffected	HardHit	HardHit	HardHit
Obliterate	Obliterate	HardHit L	HardHit L	N L / K L , Oblit L
Obliterate	Obliterate	HardHit L	HardHit L	N L / K L , Oblit L
Obliterate	Obliterate	HardHit L	HardHit L	N L / K L , Oblit L
HardHit	Obliterate	HardHit L	HardHit L	LightHit
LightHit	HardHit	LightHit	LightHit	Unaffected
HardHit	Obliterate	HardHit L	HardHit L	HardHit L
LightHit	Unaffected	LightHit	LightHit	Unaffected xp
HardHit	Unaffected	LightHit	LightHit	Unaffected xp
HardHit	Obliterate	HardHit	HardHit	LightHit xp
HardHit	Obliterate	HardHit	HardHit	HardHit xp

Not up-rootable by anything. Spin Attack interrupts ambush, but doesn't kill

More of a spiky prop. Either destroyed or not.

Locomotive tool; not killable.

Locomotive tool; not killable.

Explosives in mouth = oblit; else stun / kill F.Gun in mouth feeds shark (5x=explode)

Large	Large
Do Not Disturb	Night Creature
Unaffected	Unaffected
Unaffected b	Unaffected b
LightHit	LightHit
LightHit	LightHit
LightHit	LightHit
LightHit	LightHit
HardHit L	HardHit L
LightHit	LightHit
HardHit L	HardHit L
HardHit L	HardHit L
Unaffected	HardHit
Unaffected	HardHit
N L / K L	N L / K L
N L / K L	N L / K L
N L / K L	N L / K L
LightHit	LightHit
LightHit	LightHit
LightHit	LightHit
Unaffected	Unaffected
LightHit	LightHit
LightHit	HardHit
HardHit	HardHit

Can be lured by the glow tool, but immune to its daze effects

Especially vulnerable to glow tool's daze effect

Detail Design Spec: Bottle Rocket Launcher

Overview

The following document details the edge cases of how the Bottle Rocket Launcher is to be used in game.

Description

The Bottle Rocket Launcher is an explosive ranged weapon that doubles as an “out of control” world navigation device.

- Upon initial use of the Bottle Rocket Launcher, the rocket is propelled forwards at a high speed. Crash grabs onto the back of the fired rocket, and can pilot it for a short time.
 - The rocket starts off slow for the first 2 seconds of launching (similar to a sidewinder missile launching from a fighter jet). At this point, Crash grabs onto it and hangs on tight.
 - After this time, the rocket accelerates forward quickly, reaching its top speed within 3 seconds of flying.
 - At this 3 second mark, the rocket begins to spew black smoke, signaling that it will explode soon.
 - After ~4 seconds of flying, the rocket explodes in Crash’s hands, dealing damage to him.
- Using the piloting controls, players can launch the rocket at enemies for massive damage. They must aim the rocket at an enemy then jump off.
 - Jumping off of a rocket launches it in the direction Crash and the rocket were facing the moment Crash left the rocket.
 - The length of time that a released rocket continues to fly is dependent on when players released it.
 - Above 1 second: The rocket continues until its total flying time is 4 seconds (so riding the rocket for 2 seconds and then releasing it allows the rocket to fly another 2 seconds)
 - Under 1 second: The rocket continues for an additional 1 second from the time of release (so riding a rocket for 3.75 seconds and then releasing it allows the rocket to still fly for 1 second)
 - Released rockets auto-target to the enemy that was last highlighted (see below).
- Players can release a rocket by pressing Use or Jump while riding.
- Spin-Use with the Bottle Rocket Launcher equipped allows players to launch vertically to a height of ~50m (TBD), after which time, the rocket leaves Crash’s hands.
- Once a rocket has been released, players can ride another rocket, allowing them to reach new heights.

- When another rocket is launched to ride in mid-air, it always initiates in the direction that Crash was facing upon the button press, thus players can change their direction of movement.
- Upon any impact, the Bottle Rocket explodes, doing damage within a spherical volume. Any destructible objects, enemies and even Crash that are hit by the explosion take damage.
 - Crash takes 3 points of damage (TBD)
 - If Crash rides the rocket into water, the rocket stops but does not explode.
- Players can only get to a certain height in the world (~300m – TBD). After this point, Crash has reached the physical limit that he can stand, and experiences a humorous death animations (such as Freezing and floating off, or being blown to smithereens).

Launched Rockets

Once players are in the air piloting a rocket, they are able to target enemies with the rocket. The rocket has a certain level of auto-targeting based on where enemies are.

- As Crash flies forward, an angle of detection is cast before him (ignoring height).
- The closest enemy within that angle is highlighted as the next target, with the highlight coloured based on whether the enemy is within range or not.
- When the rocket is released, it attempts to home in on the last enemy it had targeted.
 - The rocket does not have the best turning angle, however, so too sharp of a turn will cause the rocket to miss its intended target.

Components

Bottle Rocket Launcher Piece (???) + Propulsion (Firefly)

Controls

Players control themselves on the Bottle Rocket using traditional flight controls. Up angles the rocket downwards, causing it to descend. Down angles the rocket up, which allows players to go almost vertically. Left and Right roll the rocket left or right, changing movement direction.

- **Use:** Pressing the Use button automatically causes Crash to jump, and then launch the rocket (so there are never any ground “takeoffs”). If players press Use while piloting, Crash releases the rocket he is currently riding, and automatically launches/begins to ride another one.
 - **Note:** The Bottle Rocket can be used in the air or on the ground, so players can launch themselves while falling, jumping, etc.

- **Jump:** Pressing Jump while piloting a Bottle Rocket cause Crash to jump off his current rocket, releasing it, after which, he starts to fall.
- **Spin:** If players press Spin while piloting a Bottle Rocket, Crash releases the rocket (similar to pressing jump), but instead does an air spin attack.
- **Spin-Use:** While on the ground, spinning and then pressing Use with the Bottle Rocket Launcher equipped causes Crash to be launched vertically into the air to ~50m (TBD). Once at this height, Crash releases the rocket and begins to free fall.

Enemy Interactions

Note: The following actions are default for the enemy sizes. Some special case enemies have alternate reactions, which are detailed here:

//crash/production/crash4/docs/Design/CrashLanded/CreatureReactions/CreatureReactionTable.xls

Small Enemies:

- Small enemies struck by a Bottle Rocket are “obliterated”, which means that they explode and disappear.

Medium Enemies:

- Medium enemies struck by a Bottle Rocket are “obliterated”, which means that they explode and disappear.

Large Enemies:

- Large enemies struck by a Bottle Rocket are pushed back ~7m (TBD), and take “near death” damage (in the 2 point health system).

If players take damage while riding the Bottle Rocket (from ranged enemy attacks), the rocket explodes upon contact, and Crash takes damage for the rocket exploding (but not the enemy attack).

Prop Interactions

Destructible Props: The Bottle Rockets can destroy any props in the world that are designated as “destructible”, or “damage takers” (even those which are flagged as destructible for other weapons, such as the Boombat – due to the Bottle Rocket Launcher appearing as one of the last weapons in the game, it is acceptable for players to use this option). Such props include the following:

- **Destructible Environmental Objects:** These include trees, large stones, etc.
- **Bottle Rocket Specific Props:** During island 4, there are several “generators” that players must destroy using the Bottle Rocket. These objects do not take damage from any other weapons.

Item Interaction List (incomplete)

- **Grenades:** Upon hitting a grenade with the Bottle Rocket, the grenade explodes, damaging all entities within the explosion range, including Crash.
- **Crates:** If players use the Bottle Rocket on a crate, the crate is destroyed, and all its contents hit the ground.
- **Wumpa Fruit:** Wumpa fruit should be collected, and is not interacted with the Bottle Rocket.
- **Sea Urchins:** Sea urchins that are hit by the Bottle Rocket are destroyed.
- **Resources:** Resources should be collected, and are not interacted with the Bottle Rocket.

Upgrades (Values TBD)

- **Level 1:**
 - Regular number rockets shot at one time (1)
 - Regular rocket control (tightness of turning)
 - Regular rocket time before explosion (4 sec)
- **Level 2**
 - Medium number rockets shot at one time (3)
 - Medium rocket control (tightness of turning)
 - Medium rocket time before explosion (6 sec)
- **Level 3**
 - Maximum number rockets shot at one time (5)
 - High level of rocket control (tightness of turning)
 - Long rocket time before explosion (8 sec)

Camera

The camera position when piloting a Bottle Rocket is pulled further back (~10m TBD) than normal, with a wider field of view to provide players with a greater sense of speed, as well as a clearer view of the open world.

- When players perform the spin-use, the camera swoops up, looking down at Crash, who flies towards the camera (and the sky). Once Crash has reached the height of his launch, the camera quickly shifts to a view looking from below to see the rocket continuing into the sky without Crash. The camera then swoops back to air/fall camera.
- If players release or unequip the Bottle Rocket mid-air, the camera pulls in and angles to the “fall camera”

Presentation Elements

Bottle Rocket Pacing: The usage of the Bottle Rocket Launcher needs several steps implemented in the presentation to create a more impactful experience.

- Pause when initially launching the Bottle Rocket, where the rocket pauses and a stream of fires shoots from the back (similar to how sidewinder missiles are launched from fighter jets).

Detail Design Spec: Boombat

Overview

The following document details the edge cases of how the Boombat is to be used in game.

Description

The Boombat is an explosive melee weapon that forces players to move into close range (danger) in order to do high damaging attacks.

- The regular strike of the Boombat is a lateral strike that hits enemies within a 120 degree arc. Enemies hit by regular strikes are put into a “launched” state, which changes based on the enemy size type (see below).
- The regular strike can be chained into a 3-hit combo if players press the Use button in proper timing succession (just rapidly tapping the Use button results in Crash performing the initial swing attack over and over again – proper timing is a skill challenge for players). The additional strikes perform different animations, extending the reach of the Boombat further (thus encouraging players to combo).
 - The exact timing of these button presses, and the combo animations are to be determined through playtesting
- Holding the Use button allows Crash to hold up the Boombat and “charge” the attack. This is a much more damaging attack, but it forces players to time the release of the Use button for when they’d like to strike with a charged swing.
 - Crash can be moved while charging the Boombat strike. Jumping or falling cancels the charge.
 - To become fully charged, players must hold the button down for ~2 seconds (TBD), where a special “charge” effect plays. Once the swing has been fully charged, the release causes a charge strike. However, if players charge and release before the swing is “fully charged” (ie. The effect does not finish playing), then the swing should revert to a regular swing.
- The centre of every swing arc is the direction that Crash is facing, thus if players are directly facing their enemies, they should always connect.
- If players spin, and then press Use (while having the Boombat equipped), they launch a cluster of several bombs in a circular pattern around Crash. This causes a wall of explosions, hitting all enemies within range.

Launched Targets

Once players have struck a susceptible enemy or object with the Boombat, that target is put into a “launched” state. The distance that a target is launched is based on the object type and strike type (small/medium/large enemies or objects, regular/charged strikes).

However, all susceptible “launched” targets behave in the same manner in regards to being launched.

Targets that have been hit and launched essentially become an attack projectile, and have the following properties:

- They fly in a straight trajectory, determined by the auto-targeting system (see below).
- Their collision becomes a damage collision.
- Upon colliding with an enemy or object, they apply damage.
 - **The damage applied is equivalent to a regular Boombat strike** (TBD)
 - The launched object bounces off its target and lands to the ground
 - The target of the launched object is pushed back ~7m (TBD).

When an enemy or object is “launched”, it automatically aims to the closest valid target. The following is the launched object’s targeting logic:

- Take the direction that Crash is facing
- Have a ~45 degree (TBD) cone of detection in the direction that Crash is facing
- Check for the closest valid enemy within the cone of detection (valid means that there is a clear path from Crash to that location (ie. No obstructions). Valid also includes the furthest possible distance from Crash that the enemy/object being hit can fly (ex. A Crab can potentially fly 50m, whereas a Dingo can only fly 30m – values TBD)
 - Always take the enemy that is closer to Crash
 - If 2 enemies are equidistant, always take the enemy that is closer to the centre of the targeting cone.
- If there are no enemies within the cone of detection, launch the object/enemy in a straight line in the direction that Crash is facing.
- There is also potential of weighting certain enemy types to be more likely targets than other, based on their threat rating at range.
 - For example, Dingodiles, which have ranged attacks, may have higher weighting for being a launched target rather than a crab, which poses no threat at range. Thus players would always want to target the Dingodile in range, even if it is further than a crab.
- **NOTE:** This targeting method, which is based on the direction that Crash is facing, may change if it is found to be too difficult to target enemies. In that case, the targeting will change to always targeting the enemy that is closest to the centre of the camera’s view.

Components

Tube (Bamboo) + Explosion (Grenade Seed)

Enemy Interactions

Note: The following actions are default for the enemy sizes. Some special case enemies have alternate reactions, which are detailed here:

//crash/production/crash4/docs/Design/CrashLanded/CreatureReactions/CreatureReactionTable.xls

Small Enemies:

- **Regular Boombat Use:** Small enemies are “launched” a far distance 50m (TBD), and take killing damage.
- **Boombat Charge Attack:** Small enemies struck by a charged Boombat are “obliterated”, which means that they explode and disappear. This also means that they cannot be used as a “launched” projectile.
- **Boomba Spin-Use (Cluster Bombs):** Any small enemies caught in the collision of the cluster bomb explosions are blown back slightly (~2m in air, ~5m back – TBD), and take killing damage.
- **Hit by an enemy/object “launched” by the Boombat Strike:** Small enemies are pushed back ~7m (TBD), and take killing damage.

Medium Enemies:

- **Regular Boombat Use:** Medium-sized enemies are “launched” a medium distance 30m (TBD), and take “near death” damage (in the 2 point health system).
- **Boombat Charge Attack:** Medium enemies are “launched” a far distance 50m (TBD), and take killing damage.
- **Boomba Spin-Use (Cluster Bombs):** Any medium-sized enemies caught in the collision of the cluster bomb explosions are blown back slightly (~2m in air, ~5m back – TBD), and take “near death” damage (in the 2 point health system).
- **Hit by an enemy/object “launched” by the Boombat Strike:** Medium-sized enemies are pushed back ~7m (TBD), and take “near death” damage (in the 2 point health system).

Large Enemies:

- **Regular Boombat Use:** Large enemies perform a negligible hit reaction, and the strike does no damage.
- **Boombat Charge Attack:** Medium enemies are “launched” a short distance 7m (TBD), but take no damage.
- **Boomba Spin-Use (Cluster Bombs):** Large enemies perform a negligible hit reaction, and the strike does no damage.
- **Hit by an enemy/object “launched” by the Boombat Strike:** Large enemies are pushed back a short distance (~2m - TBD), but take no damage.

Prop Interactions

Destructible Props: These props are scattered through the world and are path blockers for players, who must use the Boombat to clear the path and continue. Once these props have been destroyed once, they do not respawn. There are 3 types of “Boombat” destructible props:

- **Weak Boombat Props:** These are objects that are smaller rocks, walls, or trees. They have signature visual queues applied to them, such as large cracks or a specific shader. Weak Boombat props require only one Boombat swing (charged or otherwise) to destroy.
- **Medium Strength Boombat Props:** These are somewhat larger rocks or walls. They have the same visual queues as weak Boombat props. However, these obstacles take 3 regular hits with the Boombat, or one charged strike. Each regular strike provides players with some feedback that they are damaging the prop, such as particles of crumbling stone, or sound effects.
- **Heavy Strength Boombat Props:** These are the largest/strongest Boombat props. They should have a similar, but distinctly different visual queue to the other Boombat props, clearly illustrating that this is a “Strong” obstacle. These obstacles are only susceptible to a fully charged Boombat swing.

Note that Cluster bombs are equivalent to regular Boombat strikes for the purposes of destructible props.

Item Interaction List

- **Grenades:** Upon hitting a grenade with the Boombat, the grenade explodes, damaging all entities within the explosion range, including Crash.
- **Crates:** If players use the Boombat on a crate, the crate is destroyed, and all its contents hit the ground. The contents should never be hit by the same Boombat swing that destroys the crate.
- **Wumpa Fruit:** Wumpa fruit should be collected, and is not interacted with the Boombat.
- **Sea Urchins:** Sea urchins that are hit by the Boombat before they have had a chance to explode are launched, and considered a “small enemy” (and thus are targeted and damage enemies).
- **Resources:** Resources should be collected, and is not interacted with the Boombat.

Upgrades (Values TBD)

- **Level 1:**
 - Short Reach
 - 3 Bombs for Cluster Bomb Attack
- **Level 2:**
 - Medium Reach

- 5 Bombs for Cluster Bomb Attack
- **Level 3:**
 - Long Reach
 - 7 Bombs for Cluster Bomb Attack

Camera

The camera position when using the Boombat remains the same as the normal gameplay except during the following situations:

- An enemy is launched into the distance that the camera is facing. In this case, the camera attempts to slightly shift to keep the launched enemy in frame.

Presentation Elements

Boombat Pacing: The usage of the Boombat needs several steps implemented in the presentation to create a more impactful experience.

- Slight frame freeze upon hitting with a regular strike (~2 frames)
- Heavy frame freeze upon hitting with a charged strike (~5 frames)

Appendix F: Tool List and Specs

- Frogzooka
- Boombat
- Glow Tool
- Fertilizer Gun
- Bottle Rocket Launcher
- Jetpack

Attack Tools

Frogzooka

- *Description:*
 - Sucks things to the player. Can collect creatures and items.
 - Fast and snappy
 - Defensive oriented
 - Can suck dangerous objects like explosive seeds out of the air
 - Tug of war mechanic
 - Get pulled places
 - Automatically pulled towards the walls
 - There are special props that players can get pulled to as well. They will be prioritized over normal walls and surfaces.
 - Jump & fire to get pulled towards anything
 - Go towards object (wild pig)
 - Fly towards big things you don't have strength to pull
 - Collect other things that are smaller than you
 - Players can upgrade the strength of the frogzooka to pull bigger things towards them.
- *Controls:*
 - Use
 - straight suck shot (automatic)
 - Spin-Use
 - Collect in a circle to suck things towards the player.
 - Suck creatures towards w/use, attack/spin
 - Suck everything around towards the player
 - Is a smaller radius than the frogzooka normally can reach

- 5 meters or so around the player)
 - Animation sells it
- Jump-Use
 - use in the air
- Jump-Spin-Use
 - Spin-use in the air
- *Resource Parts and Ammo:*
 - Ammo
 - Frogzooka Ammo
 - Resources
 - Bottle (one part tool)
- *Upgrades:*
 - Level 1
 - Regular speed of fire (current implementation)
 - Regular tongue length
 - 20m straight use
 - 5m radius with spin use
 - Level 2
 - 150% regular speed of fire
 - Medium tongue length
 - 22.5m straight use
 - 10m radius with spin use
 - Level 3
 - 200% regular speed of fire
 - Long tongue length
 - 25m straight use
 - 15m radius with spin use
- *Risk / Reward of use:*
- *Challenges / Units of Play:*
 - Pull self across gaps
 - Collect Hazards
 - Use in the air could pull the player towards large targets automatically and players can spin attack them to break the object.

- Timed Challenges
 - Immobilize creatures that are pulled towards you
 - Stunned
 - Suck & pull things down
 - Hinged prop
 - No exclusive
 - Run away from it
 - Like fishing
- *Additional Tool Notes and Ideas:*

Boom Bat

- *Description:*

Explosive bat that blows enemies away.

- Explosive bat
 - Knocks things far away
 - Example: Homerun bat from *Super Smash Bros.*
 - Charge up time
 - Short delay
 - Vulnerable
 - Can be held in charged state for instant release
 - Emphasis on connect
 - Pause at moment of connect
 - Player skids back a bit
 - High speed launching of target
 - Small things are killed and launched very far
 - Medium creatures are stunned and knocked back less
 - Destroys breakable objects
 - Launched sturdy objects
 - Frontal attack arc
 - 90°-120°
 - Delay between reloads
 - Only reloads if it hits something (will not be used by hitting air)
- *Controls:*

- Controls:
 - Use:
 - Swing attack
 - Launches target on hit
 - Can hit objects into other objects (some auto-targeting taking place here)
 - Launch depends on creature / object size
 - While holding manual targeting the victim's launch can be aimed
 - Launch into another enemy
 - Launch into an environment prop
 - Reloads automatically after each hit.
 - Hold button to charge and prep swing for more damage and further knockback:
 - Can charge indefinitely
 - Can rotate on the spot – no movement. Players can release to get out of the charging state.
 - Bat back projectiles
 - Bating directly back at enemy requires timing – skilled move.
 - Can't bat back explosive objects (they will immediately explode and waste ammo on the bat.
 - Spin – Use:
 - Cluster bomb attacks that releases a circle of explosives around the player.
 - Causes weak knock back
 - Use up to 5 ammo. If the player doesn't have 5, then it uses all they have
 - Jump – Use:
 - Use while jumping
 - Player knockback
 - Jump – Spin – Use:
 - Spin use while jumping

- *Resource Parts and Ammo:*

- Resource Components:
 - 2 unique pieces
 - Giving through completion of 2 specific first island territories
- Fuel Resource:
 - Fireflies
 - Explosive Seeds

- *Upgrades:*

Note: Combo attack numbers may change based on animation

Level 1

- Regular knockback distance on charge swing (current distance)
- Single Swing combo (1 hit)
- 3 Bombs for spin attack

Level 2

- Medium knockback distance on charge swing (1.5x current distance)
- Double Swing combo (2 hit)
- 4 Bombs for spin attack

Level 3

- Long knockback distance on charge swing (2x current distance)
- Triple Swing combo (3 hit)
- 5 Bombs for spin attack

- *Risk / Reward of use:*

- Reward of use:
 - Satisfying sense of power when hitting
 - Kills small creatures and sends them flying
 - Example: *Crash of the Titans* super kick
 - Reflects projectiles
 - Example: Baseball batter
 - Can be upgraded to take on larger foes
- Risk
 - Downtime after hitting target

- Slight delay before swing
 - Mitigated by charging the attack
- *Challenges / Units of Play:*
 - Un-gate areas
 - Knock things away (out of environments)
 - To a point
 - Field goals
 - Destroy things by launched enemies
 - Timed release on moving object
 - Timing Challenge / multi staged prop to destroy
 - Projectiles that can be knocked back at enemies as fiery balls - more speed / impact than they had when they headed towards players.
 - 3 hit combos (presentation only) – timing challenge
 - Environment
 - Destroys any size breakable
 - Looses boulders
 - Topples over tall trees / rocks
 - Can be used to crush creatures / territory mission objectives
 - Creatures:
 - Small
 - Kills
 - Large knockback
 - Can launch creatures into targets
 - Medium
 - Stun
 - Small knockback
 - Upgraded for more power to launch farther
 - Large
 - No effect until upgraded
- *Additional Tool Notes and Ideas:*

Glow Tool

- *Description:*

- A shrieking glow worm that produces light and sound. The sound and light can paralyze some creatures and attract others. It's very useful for navigating at night and in dark environments.
 - By default the glow tool will emit light in a small radius around them (enough to see and get through caves and see at night).
 - The player can have the source of the light on them or they can shoot it away. They can easily attract the light back to the gun, but there can only be one point light in the world at a time.
 - Temporarily paralyzes creatures:
 - Night creature
 - Any other creature except fireflies and DND creatures.
 - Attracts certain enemies:
 - When players have the light on them they make a white noise that attracts the night creature.
 - When players use their flash bang, the glow worm lights up and can attract Do Not Disturb creature and Fireflies.
 - Players can shoot the glow tool away and distract these creatures to escape or set them up.
 - Fuel spent during use, no fuel is lost while the items is only equipped.
 - Center point of light radius offset ahead of Crash
- *Controls:*
 - Use:
 - Shoot Light Away
 - One of these items exists in the world at all times.
 - Light can stay out in the world until players press use again or get further away from the point light.
 -

- Spin – Use:
 - A shrieking, flash bang:
 - Increases the light sphere radius
 - Sends out a sharking sound wave
 - Can paralyze certain enemies:
 - Dingos
 - Night Creatures
 - And other things with sensitive hearing.
- Jump – Use:
 - Shoot light while in air.
- Jump – Spin – Use:
 - In the air version of Spin-Use (shrieking flash bang)
- *Resource Parts and Ammo:*
 - Resource Components:
 - Giving through completion of 2-3 second island territories
 - Glow Worm Larva
 - Looks kind of like a brain and is actually one of the major technology parts that is needed for the Uber death ray.
 - Fuel Resource:
 - Food that keeps the glow worm glowing
 - Ammo that allows players to attract and repel the glow worm. (Fishing line? Magnetic thing?)
- *Upgrades:*
 - Level 1
 - Regular enemy daze time – spin use (7 seconds)
 - Regular daze flash range – spin use (5m)
 - Regular throwing range (10m) (**Only available if players can manually choose their throwing distance**)
 - Level 2
 - Medium enemy daze time – spin use (12 seconds)
 - Medium daze flash range – spin use (10m)

- Medium throwing range (20m) (**Only available if players can manually choose their throwing distance**)

Level 3

- Long enemy daze time – spin use (15 seconds)
- Long daze flash range – spin use (15m)
- Long throwing range (30m) (**Only available if players can manually choose their throwing distance**)

Additional

- New songs
 - This is a presentational element based on the how the concept for this tool is developed
- *Risk / Reward of use:*
 - Stun and distract creatures
 - Safer travel at night
 - Attracts certain enemies
 - Do not disturb
 - Firefly
 - Could create hazard space or safe space
 - More moderate attack speed (slower than boom bat)
 - Certain enemies immune to either the light or the sound
- *Challenges / Units of Play:*
 - Creatures:
 - Weapon against vulnerable creatures
 - Scares certain creatures back
 - Night creature
 - Attracts certain creatures
 - Do not disturb
 - Firefly
 - Environment
 - Destroying overgrown plants for Beautification
 - Un-gating (based on things that respond to the light or sound)
 - Navigation in the dark
 - Illuminating environment props that then become light sources

- *Additional Tool Notes and Ideas:*
 - Photosynthesis
 - Could help grow plants

Fertilizer Gun

- *Description:*
 - A gun that shoot fertilizer seeds at enemies and surface types and causes a temporary plant or tree to instantly grow. It has a different effect based on what surface type the player hits
 - It is attack focused.
 - Can only be used on the ground, not on walls.
 - The flora that grows can have several properties:
 - Damaging (i.e. Rose Thorns, Cactus, Tree First)
 - Defensive (i.e. Thick Fern to block projectiles, Grenade Plant)
 - Locomotion (i.e. Bouncy Foliage, Platformable Tree branch or tuff, lily pad in swamp, lava platforms).
 - Trapping (i.e. Weeds, Tangled Grass, Poison Ivy, Man Eating Plant)
 - Example of plants life span
 - Blasts out of the ground
 - Knocks enemies up
 - Sits in the world for a short amount of time
 - Will either block, damage or collapse when enemies hit it
 - Then it rapidly decays
 - Gone from the world
 - Unlocked Mid-late through the game
 - Specific areas will (dirt mounds) will grows specific massive props
 - Creatures will obstacle avoid these like other props
 - Stuns and damage medium creatures

- Plant size may vary based on the surface type (2-10m)
- Larger plants will grow to a smaller size based on constricted locations
 - 2m – 5m - 10m
- *Controls:*
 - Use
 - Single lob shot
 - Reticule on the ground when auto aiming
 - Manuel aiming is a straight shot
 - The player is able to move and aim
 - Spin-Use
 - Spread shot
 - Creates a row of plants in front of Crash
 - Short range defensive move
 - Creates a wall with some plants
 - Jump-Use
 - Single shot in the air that reaches further
 - Jump-Spin-Use
 - Spread shot in the air
 - Auto and manual targeting
 - The reticule shows the player where a shot will and will not work
 - Reference Ratchet and Clank for ease of shooting
- *Resource Parts and Ammo:*
 - Fertilizer
 - Seeds
- *Upgrades:*
 - Level 1
 - Regular number of plants shot – spin use (3)
 - Regular time that plants last (10 sec) (**Needs to be balanced with number of props available**)
 - Regular rate of fire (1/sec) (**Needs to be balanced with number of props available**)

Level 2

- Medium number of plants shot – spin use (5)
- Medium time that plants last (12 sec) (**Needs to be balanced with number of props available**)
- Medium rate of fire (1.5/sec) (**Needs to be balanced with number of props available**)

Level 3

- Large number of plants shot – spin use (7)
- Long time that plants last (15 sec) (**Needs to be balanced with number of props available**)
- High rate of fire (2/sec) (**Needs to be balanced with number of props available**)

Note: At this point, having each plant last longer and increasing the rate of fire are opposing, and thus only the more useful of the two should be implemented

- *Risk / Reward of use:*
 - Not good for close combat
 - Delayed growth
- *Challenges / Units of Play:*
 - Frogs can snatch the F. Gun seed from the air. They neutralize the threat, but explode as a side effect.
- *Additional Tool Notes and Ideas:*
 - Surface Type Ideas (not necessarily plant based)
 - Beach Sand = Palm tree
 - Grove = Giant fist tree
 - Grassland = Bouncy bush
 - Ocean water = coral
 - Swamp = Lily pads
 - Desert = Cactus
 - Wetland = TBA
 - Dry grass = TBA
 - Jungle = Ambush plant; poison ivy
 - Caves = Blocking roots
 - Lava = Temp burnt platform; burning bush; T2 fist; petrified wood; crystal tree platform
 - Gravel / rocky path = TBA
 - Has a different effect based on the different environments
 - Fist shaped bush that grows a fruit

- Weeds
- Bamboo (Grows under creature then with enough force flings them off)
- Fern wall
- Stalactites/Stalagmites that fall
- Grow new paths
- Grows quickly then goes away.
- Needs a default effect
- Could have multiple uses
 - Blocking
 - Trapping
 - New platform

Rocket

- *Description:*
 - A freaking rocket that Crash rides. The rocket flies erratically when left on its own, so Crash has to hang onto it and guide the rocket to its target.
 - The rocket will explode upon any impact.
 - The player can jump off the rocket, and the missile will continue along the last vector.
 - The rockets flight becomes more erratic after the player jumps off
 - While in the air the player can start another rocket ride, potentially in a new direction.
 - The rocket has a set limit
 - After some distance (guesstimate of 50m) the rocket runs out of fuel and falls.
 - The rocket has a vertical limit in the world.
 - Some presentation will have to support this
 - Freezing in space
 - Running out of air

- *Controls:*

- Use
 - Crash starts by riding the rocket
 - It fires horizontally in Crash's facing direction
 - Crash can start a rocket ride while in the air.
- Spin-Use is a hammer throw
 - Starts Crash Riding the missile vertically into the air
 - Has air control after launch so players can aim it.
- Jump-Use in air
 - Use in the air
- Jump-Spin-Use
 - Spin-Use in the air
- While riding the rocket
 - Spin
 - Crash does a barrel roll
 - Use
 - Crash can let go at anytime by pressing the Use button. The rocket continues on, slightly more erratically.
 - Jump
 - Crash jumps up off the rocket, and carries more forward momentum.

- *Resource Parts and Ammo:*

- Resource components
 - TBD

- *Upgrades:*

- Level 1

- Regular number rockets shot at one time (1)
 - Regular rocket control (tightness of turning)
 - Regular rocket time before explosion (4 sec)

- Level 2

- Medium number rockets shot at one time (3) (NOTE: All upgrades do not increase ammo usage)
 - Medium rocket control (tightness of turning)
 - Medium rocket time before explosion (6 sec)

Level 3

- Maximum number rockets shot at one time (5) (NOTE: All upgrades do not increase ammo usage)
- High level of rocket control (tightness of turning)
- Long rocket time before explosion (8 sec)
- *Risk / Reward of use:*
 - This is power, but frantic and dangerous.
 - Requires lots of resources
- *Challenges / Units of Play:*
 - TBD
- *Additional Tool Notes and Ideas:*
 - Could be used infiltrating into a den and blasting the target.
 - This tool is link to some of the glider vultures.
 - The player will be able to get up high and then fall onto the vultures for a ride
 - Crashing into them leaves a puff of feathers
 - Could be used to break barriers across a gap.
 - Spin while riding could be used to attack or reflect projectiles.
 - This tool should remain distinct from a precision shooter
 - This tool duplicates some of the glider functionality so the glider is now a bird you can ride. Duplicates original Bottle rocket design. Ball and chain is cut.

Locomotion Tools List

Jetpack

- *Description:*

The ultimate flying tool that gives players full control of movement while in the air.

- *Controls:*

- *Resource Parts and Ammo:*

- *Upgrades:*

- Increased burn time
- Increased speed

- *Risk / Reward of use:*

- *Challenges / Units of Play:*

- *Notes:*

Detail Design Spec: Wig of Insanity

Wig of Insanity

Description: When Crash dons the Wig of Insanity, players can see into the realm of the crazies, viewing items and platforms not accessible to the sane.

- Crash holds the Wig of Insanity in his hand. Pressing Use toggles the Wig of Insanity on and off.
 - When Crash puts on the Wig of Insanity, he makes a humorous animation to illustrate that he's gone insane.
 - While wearing the Wig of Insanity, Crash is constantly making humorous crazy facial expressions.
- All of Crash's other controls remain the same.
- While the Wig of Insanity is on, the players can see and interact with props that are normally "nonexistent" in the world (such as items or platforms). These objects are clearly highlighted through the use of shaders and effects. The rest of the world has odd looking effects as well, illustrating Crash's madness (effects such as random colour "heat warping").
 - Some obstacles (such as doors) no longer exist while wearing the Wig of Insanity, thus players can access otherwise restricted areas.
 - As players wear the Wig of Insanity continuously, Crash becomes more insane. After ~20 seconds (TBD), the entire screen begins to warp, making viewing anything very difficult for players.
 - If players remove the Wig of Insanity after reaching this state, the world returns to a normal view, but with a slight warping effect. This illustrates that the Wig of Insanity is on a "cooldown" state. If players put the Wig of Insanity back on during this cooldown, the view is still "insane" for Crash.
- If Crash is standing on an "invisible" object with the Wig of Insanity on, and then toggles it off, Crash acts as if it is no longer there, and begins to fall.
 - If Crash is in the middle of a "nonexistent" object, and then toggles the Wig of Insanity (so that Crash would be clipping inside a solid object), Crash is automatically "pushed" forward until his collision volume no longer intersects with the object.

Components: Rocket (???) + Growth (Monkeys)

Controls: Players control Crash as normal when the Wig of Insanity is equipped.

- **Use:** Pressing the Use button toggles the Wig of Insanity on or off.
- **Spin-Use:** The Wig of Insanity does not have a spin-use.

Upgrades: (Values TBD)

- **Level 1:**
 - The view is playable for 20 seconds (TBD) before going "insane"

- **Level 2:**
 - The view is playable for 30 seconds (TBD) before going “insane”
- **Level 3:**
 - The view is playable for 40 seconds (TBD) before going “insane”

Camera: The camera position when using the Wig of Insanity remains the same as the normal gameplay except that there are several shaders and effects layered over the normal view (to illustrate Crash’s insanity).

World Interactions: When Crash has the Wig on Insanity on, there are 2 types of world objects that change:

- **Appearing Objects:** These are platforms, items or other environmental elements that are not visible without the Wig of Insanity. They cannot be interacted with (stepped on, collected, etc.) unless players have the Wig of Insanity equipped and toggled “on”.
- **Disappearing Objects:** There are several walls or doors in the environment that cannot be opened or destroyed. All these walls have a signature symbol on them, illustrating that they can be passed with the Wig of Insanity. Once put on, the Wig of Insanity causes these obstacles to disappear, both visually and collision-wise. Players can pass through them, and collect the items on the other side.

Enemy Interactions: Enemy interaction does not change when the Wing of Insanity is equipped.

Risk/Reward of use: TBD

Challenges/Units of Play: TBD